Parcel G Radiological Retesting

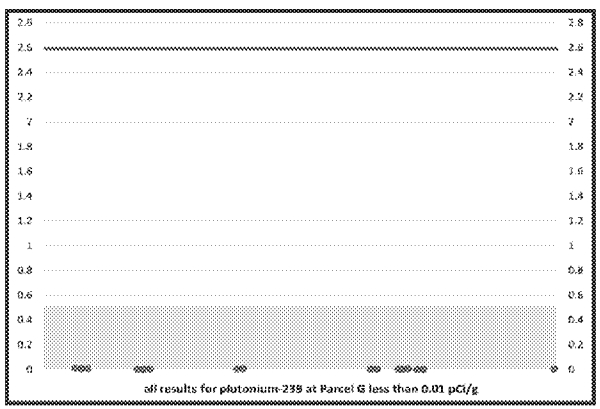
- **Recent Activities**
  - Continued Phase 1 trench unit excavations
  - Addressed unexpected rubble in trench units
    - Rocks limited access to collect soil samples
    - Removal required before sampling could continue
    - Affected fieldwork schedule
  - Modified workplan to add more samples to future sampling events
    - Per agency request
    - Affected fieldwork schedule

Asphalt in area of former building site survey unit is flipped and/or removed to prepare for radiological survey

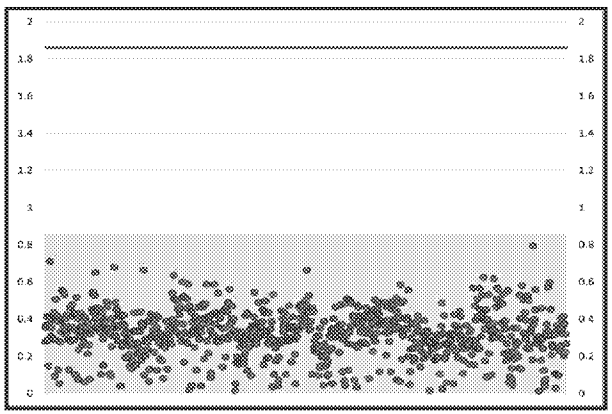
Radiological Retesting:
soil analytical results at Parcel G through August 27, 2021

- Cesium and radium data collected for all samples at Phase 1 excavations
- Strontium data collected at 10% of samples at all Phase 1 excavations
- Plutonium, thorium, and uranium collected at 10% of samples in specific locations identified in the work plan

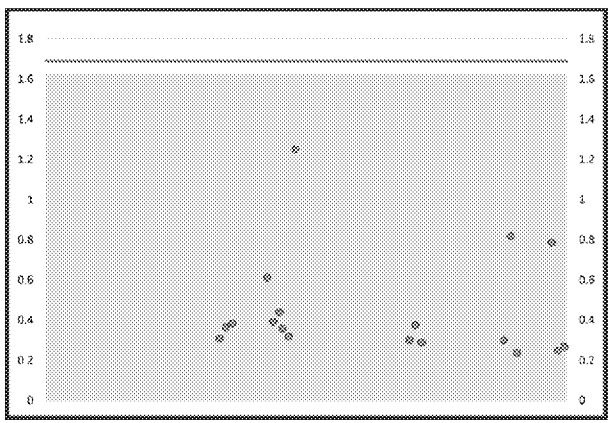
plutonium-239
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



radium-226
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



thorium-232
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



LEGEND

ROC = radionuclide of concern

All results reported in picocuries per gram (pCi/g)

ROC background range

plutonium remedial goal

radium remedial goal

thorium remedial goal

plutonium results

radium results

thorium results

Radiological Retesting:
soil analytical results at Parcel G through August 27, 2021

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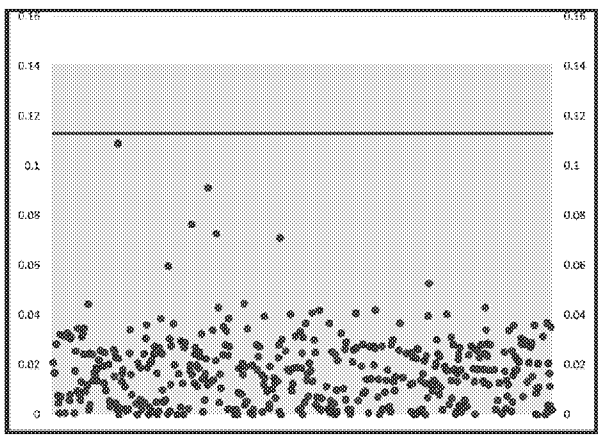
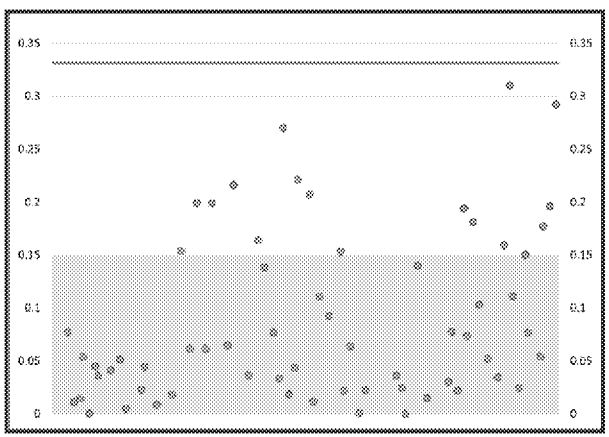
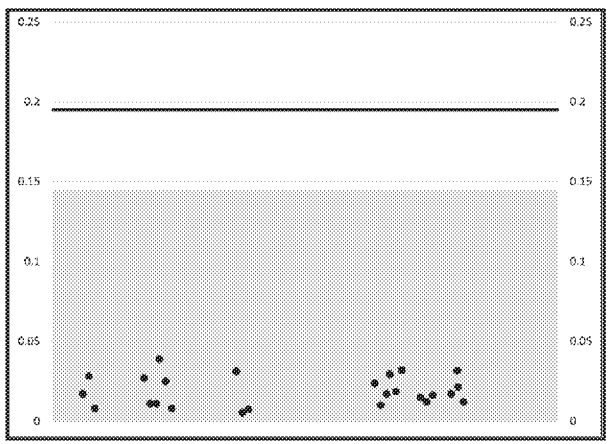
cesium-137
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



strontium-90
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



uranium-235
Radiological Retesting for Soil
HPNS Parcel G, through 8/27/21



LEGEND

ROC = radionuclide of concern

All results reported in picocuries per gram (pCi/g)

ROC background range

cesium remedial goal

strontium remedial goal

uranium remedial goal

cesium results

strontium results

uranium results

Radiological Retesting at HPNS
Strontium-90

What are the challenges in evaluating Sr-90 at HPNS?

- **Navy remedial goals** are very low
  - extremely challenging for the lab to **accurately detect**
- Current lab method appears to result in **low accuracy and low precision**
  - do not meet **data quality objectives** of Navy work plan

- **Where will the Navy test for Sr-90 at HPNS?**
  - Parcel G (ongoing testing)
  - HPNS areas identified in the 2004 HRA with the potential for releases of Sr-90 to the environment

- **What is retesting criteria for Sr-90 at HPNS?**
  - Navy remedial goal (RG): 0.331 pCi/g
  - Navy RG has been evaluated using two different tools
    - Navy RESRAD and EPA PRG
    - Both risk models confirmed the Sr-90 cleanup criteria at HPNS is approximately 100 times lower than EPA's acceptable risk rate

- **What is Navy doing to achieve accurate and precise results?**
  - Navy is using an alternate approach that **runs the same laboratory method with better precision and accuracy**
  - Navy will **re-analyze all Sr-90 samples** previously collected using updated method
  - All **new samples** will use updated method